About MPOnline
Internship Program

At MPOnline, our vision is to empower students with **job-oriented, practical** internships that bridge the gap between academic learning and industry requirements. We focus on hands-on experience, real-world projects, and mentorship from experts to ensure every intern gains the skills and confidence needed to thrive in today's competitive job market. Our programs are designed to make students **industry-ready**, opening doors to exciting career opportunities.
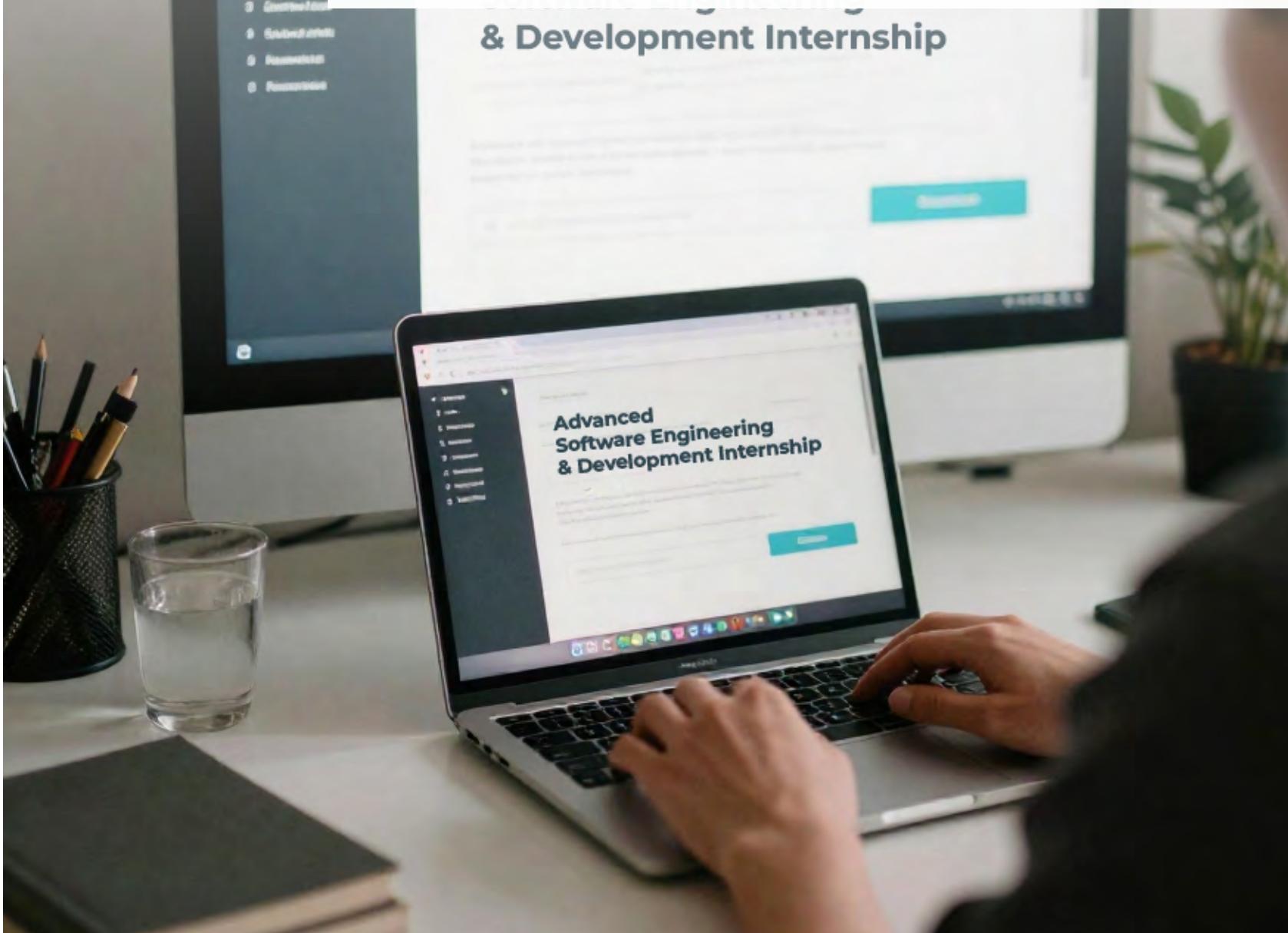
About
MPOnline Limited

MPOnline Limited, a joint venture between the Government of Madhya Pradesh and Tata Consultancy Services (TCS), empowers youth through technology-driven services and skill-oriented initiatives. With a strong presence across 40+ government departments and 200+ digital services, MPOnline plays a key role in driving digital governance while creating meaningful learning and employment opportunities for the youth of Madhya Pradesh.

Advanced Software Engineering & Development Internship

Not Just an internship. A Career Accelerator

MPOnline's Advanced Software Engineering & Development Internship is designed for students who want to master programming fundamentals, exposure to modern technologies like AI/ML, and understand real-world software/web development, and gain hands-on live project experience. This program bridges the gap between academic learning and industry expectations, helping students become confident & job-ready.

Open doors to multiple career paths -

2 Web Application Developer, Application Tester, Automation using N8N

1 Full-Stack Developer, Mobile App Developer, AI/ML Engineer.

100% Practical Training ◆ **AI Enabled Curriculum** ◆ **Dedicated Mentor**

Certificate of Completion will be awarded to all learners upon successful completion of internship.

Most In-Demand
Job of the 21st Century

Why Software Development?

◆ **High Demand Skills** – Every industry relies on software solutions for growth and innovation.

◆ **Industry-Wide Demand** – IT, Finance, Healthcare, Education, E-commerce, Startups, and more.

◆ **Works for All Backgrounds** – Ideal for Engineering, Computer Science, Mathematics, and even career switchers.

◆ **Freelancing & Entrepreneurship** – Build your own products, start a tech venture, or work independently.

◆ **Multiple Career Paths** – Full-Stack Developer, Mobile App Developer, AI/ML Engineer, Software Testing etc.

Build Your Career with
MPOnline's Practical Learning

- **Recognized Certification** – Earn MPOnline-authenticated certificates that add credibility to your profile.
- **Real e-Governance Projects** – Work on live projects & platforms, not just simulations.
- **Credible Learning Environment** – Training embedded in real public-sector digital workflows.
- **Industry-Relevant Experience** – Understand large-scale development & application of AI in supervised ecosystems.
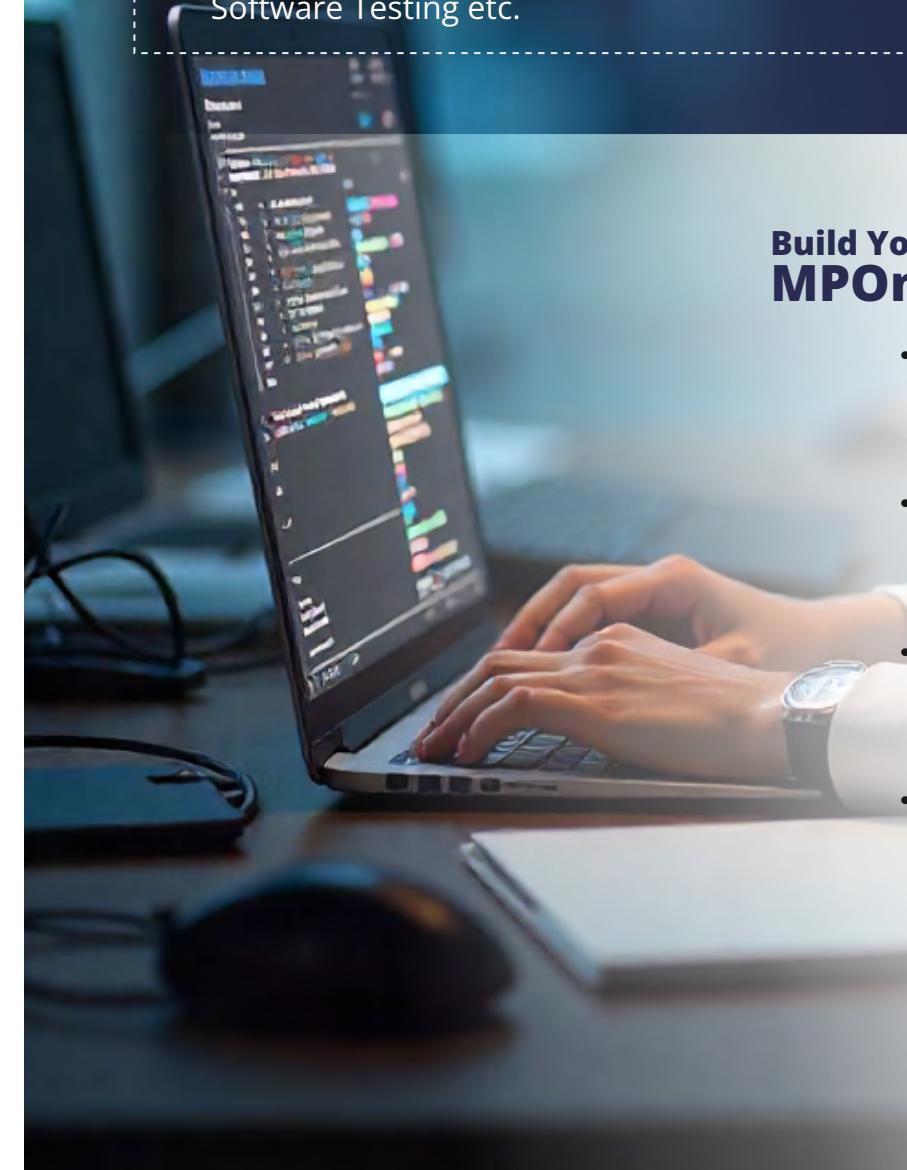
Program Duration & Learning Depth

5-months Program: Comprehensive Internship

Phase 1: Foundation (Weeks 1–4: Building Core Skills)

Week 1-2: Programming Fundamentals
Languages: C++, Java, C#, Python

- Programming paradigms and data types
- Control structures and loops
- Input/Output operations
- Web Page Designing using HTML / CSS
- Hands On Exercise

Week 3: Core Programming Concepts

- Functions and methods
- Arrays and strings
- Pointers and references C++
- OOP: classes, objects, inheritance, polymorphism, abstraction
- Hands On Exercise

Week 4: DBMS & Software Engineering

- DBMS and RDBMS concepts
- ER diagrams and database design
- SQL: DDL, DML, DQL, constraints, joins, subqueries
- SDLC models: Waterfall, Agile, Spiral
- Overview of MVC Framework
- Hands On Exercise

Phase 2: Core Skills (Advanced Development & Testing)

Weeks 5-10: Advanced Programming

- Exception and file handling
- Collections and data structures
- Git and GitHub version control
- IDE usage and debugging techniques

Week 11: SDLC & Testing Fundamentals

- SDLC vs STLC
- Manual, unit, integration testing
- Test cases and bug lifecycle

Week 12: AI/ML

- AI vs ML fundamentals
- ML types and linear regression
- Overview of AI Agents and RAG
- Introduction to N8N and Automation Workflow

Phase 3: Live Project

Weeks 13–18: Real-World Development Experience

Week 13: Planning

- Requirement analysis
- System and database design
- Agile sprint planning

Weeks 14–17: Development

- Backend development
- Database integration
- Business logic implementation
- Unit testing

Week 18: Testing & Deployment

- Functional and integration testing
- Bug fixing
- Deployment
- Documentation

Deliverables: Working project

Outcome: Transform beginners into confident, industry-ready professionals equipped with the skills, experience, and mindset

6 Program Duration & Learning Depth

1-3 months intensive internship

Phase 1: Foundation (Weeks 1–3: Building Core Skills)

Week 1: Programming Fundamentals

Languages: C++, Java, C#, Python

- Programming paradigms and data types
- Control structures and loops
- Input/Output operations
- Web Page Designing using HTML / CSS

Week 2: Core Programming Concepts

- Functions and methods
- Arrays and strings
- Pointers and references (C++)
- OOP: classes, objects, inheritance, polymorphism, abstraction

Week 3: DBMS & Software Engineering

- DBMS and RDBMS concepts
- ER diagrams and database design
- SQL: DDL, DML, DQL, constraints, joins, subqueries
- SDLC models: Waterfall, Agile, Spiral
- Overview of MVC Framework

Phase 2: Core Skills (Weeks 4–6: Advanced Development & Testing)

Weeks 4–5: Advanced Programming

- Exception and file handling
- Collections and data structures
- Git and GitHub version control
- IDE usage and debugging techniques
- Hands-On: CRUD application development

Week 6: SDLC, Testing & AI/ML

- Testing
- SDLC vs STLC
- Manual, unit, integration testing
- Test cases and bug lifecycle
- Artificial Intelligence & Machine Learning

- AI vs ML fundamentals
- ML types and linear regression
- Overview of AI Agents and RAG
- Introduction to N8N and Automation Workflow

Phase 3: Live Project (Weeks 7–11: Real-World Development Experience)

Week 7: Planning

- Requirement analysis
- System and database design
- Agile sprint planning

Weeks 8–10: Development

- Backend development
- Database integration
- Business logic implementation
- Unit testing

Week 11: Testing & Deployment

- Functional and integration testing
- Bug fixing
- Cloud deployment
- Documentation
- **Deliverables:** Working project

Outcome: Industry-ready skills with extended live project and comprehensive career preparation

Who Should Join?

12-Weeks Recommendation

Ideal for quick upskilling and short-term internships where rapid industry exposure is the primary goal

20-Weeks Recommendation

Best suited for comprehensive training and job readiness with deeper technical foundation

Students

MPOnline Career Service

Career-oriented Sessions - Attend career-oriented sessions by Subject Matter Experts (SME) and plan your career trajectory

Profile Building - Craft a Software Development, AI Skills ready resume, LinkedIn profile and make an impression on top employers.

Mock Interview Preparation - Build confidence through mock interviews based on the most asked questions by the top employers.

Mentoring Sessions - Get dedicated 1:1 mentoring to support your journey into an IT professional role, with hands-on AI/ML exposure

Advanced Software Engineering & Development Internship:

📞 **Call us:** +91-+91-70245 89934, 7880116418, 7049923881

✉️ **Write to us:**
internship@mponline.gov.in

🌐 **Visit us at:**
https://internship.mponline.gov.in/

MPonline Limited
Transforming Governance, Empowering Citizens
Joint venture between Govt of Madhya Pradesh and TCS

Let's Talk